植 物 分 类 学 报 32 (6): 577—580 (1994)
Acta Phytotaxonomica Sinica

中国高原芥属二新种*

吴玉虎
(中国科学院西北高原生物研究所，西宁 810001)

安争夕
(新疆八一农学院，乌鲁木齐 830052)

TWO NEW SPECIES OF CHINESE *CHEISTOLEA*

Wu Yu-hu
(*Northwest Plateau Institute of Biology, Academia Sinica*, Xining 810001)

An Zheng-xi
(*Xinjiang August-1st Agricultural College*, Urumqi 830052)

Key words *Christolea*; *Ch. karakorumensis*; *Ch. longmucoensis*

关键词 高原芥属；喀喇昆仑高原芥；龙木错高原芥

1. **喀喇昆仑高原芥** 新种 图 1: 1—10

Christolea karakorumensis Y. H. Wu et Z. X. An, sp. nov.

Species nova affinis *Ch. proliferae* (Maxim.) Jafri, sed a qua differt laminis foliorum pectinatim 7—9-pinnatipartitis, sepalis basi connatis, petalis cyano-purpureis vel smaragdinis, glandulis lateralibus insidentibus, ovario glabro.

Herba perennis, 2—4 cm alta, omnino albo-villosa. Caulis erectus, simplex. Folia carnosula, isabellina, ambitu spathulata vel rhomboideo-spathulata, 10—14 mm longa, 6—9 mm lata, laminis pectinatim 7—9-pinnatipartitis, utrinque villosis, elevate venosis, basi in petiolum canaliculatum gradatim attenuatis. Racemus dichotomus mutiflorus; pedicelli c. 4 mm longi, dense vellei; sepala anguste oblonga, supra medium purpurea, infra medium flava, cyathiformiter connata, pilosa, apice obtusa, margine flavo-membranacea, 4—5.5 mm longa, duo interiora 2—2.5 mm lata, duo exteriora c. 1.5 mm lata, ventre basi incystata; petala spathulata vel obovato-cuneiformia, superne cyano-purpurea vel smaragdina, inferne et pro parte media flava, 7—8 mm longa, 2.5—3 mm lata, apice truncata, basi in unguem angustata glandulis lateralibus insidentia; stamina 6; filamentis carnosulis, compressis, brevioribus 3—4 mm longis, longioribus 4—5 mm longis, antheris ovato-oblongis 1 mm longis, apice mucronulatis; glandulae nectariferae laterales binatim conjugatae, semiovoidae, basi latere exteriore connatae, glandulae mediae nullae; ovarium anguste ellipticum, glabrum;

---

* 国家自然科学基金资助重大项目的阶段研究成果。本文经潘锦堂研究员审改，谨此致以衷心感谢。
1993-02-21 收稿。

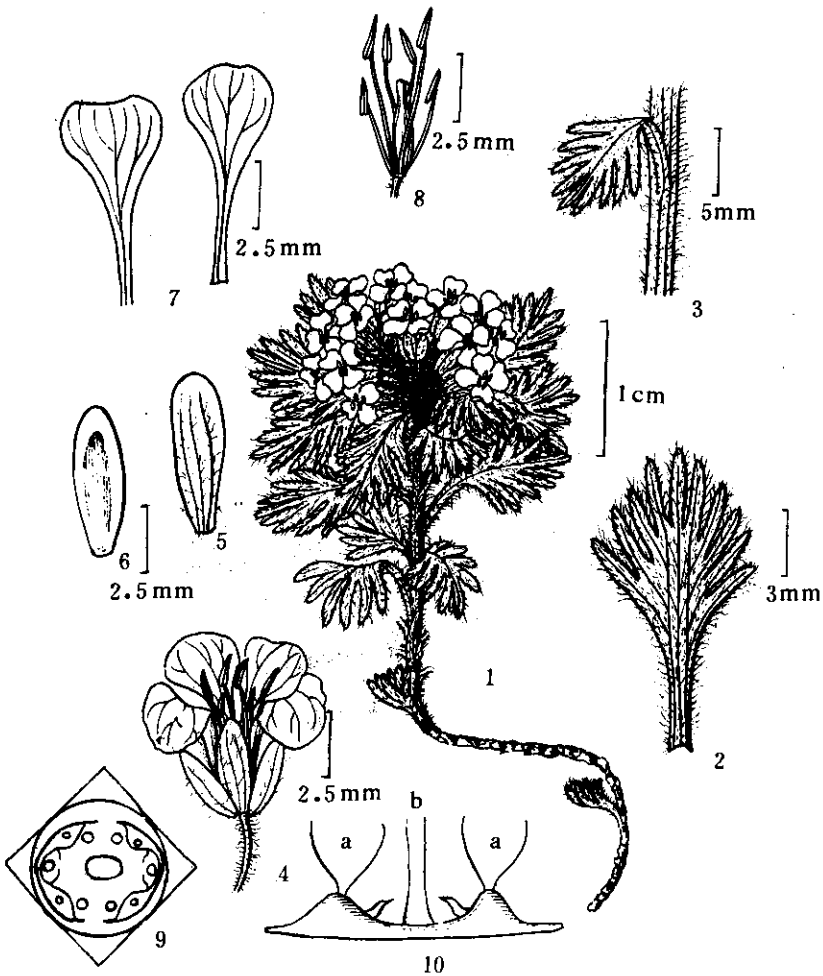

图1 喀喇昆仑高原芥 1. 植株；2. 叶；3. 茎和叶；4. 花；5. 花萼背面；6. 花萼腹面；7. 花瓣；8. 雌蕊和雄蕊；9. 侧密腺位置示意图；10. 成对联合的侧密腺横展开；a. 花瓣；b. 短花丝。(阎翠兰绘)

Fig. 1 *Christolea karakorumensis* Y. H. Wu et Z. X. An; 1. plant; 2. leaf; 3. stem and leaf; 4. flower; 5. dorsal view of ealyx; 6. ventral view of calyx; 7. petal; 8. pistil and stamen; 9. schematic drawing, showing the position of lateral nectaries; 10. tranverse spread of a pair of lateral nectaries; a. petal; b. short filament.

stigma bilobum. Siliquae maturae ignotae.

Xinjiang (新疆): Pishan (Guma) (皮山), Shenxianwan (神仙湾), ad glaram alpinam alt. 5250 m, 1989-07-25, Karakorum-Kunlun Exp. 5100 (Typus, NWBI).

多年生草本，高2—4 cm，全株被白色绵毛。茎直立，不分枝。叶肉质，土黄色，匙形或菱状匙形，长10—14 mm，宽6—9 mm，叶片7—9指状深裂，两面被柔毛，有明显的隆起脉纹，叶片基部渐狭成有纵沟的叶柄。总状花序二歧式，具多花，花梗长约4 mm，密被棉毛；萼片狭长圆形，中部以上黑紫色，中部以下淡黄色而联合成筒状，被疏柔毛，顶端钝，有淡黄色膜质边缘，长4—5.5 mm，内轮的两片宽2—2.5 mm，外轮的两片宽约1.5 mm；花瓣匙形或倒卵状楔形，上部蓝紫色或鲜绿色，中部和下部淡黄色，长7—

8 mm，宽 2.5—3 mm，顶端截形而稍下凹，基部渐狭成爪，着生于侧密腺上；雄蕊 6，花丝稍肉质，稍扁，短花丝长 3—4 mm，长花丝长 4—5 mm，花药卵状长圆形，顶端有时具小尖头；侧密腺成对联合，半卵球形，外侧基部合生，无中密腺；子房狭椭圆形，无毛，柱头 2 裂。角果未见。花期 7—8 月。

本种同丛生高原芥 *Ch. prolifera* (Maxim.) Jafri 相似，但区别点在于：叶片 7—9 指状深裂；萼片基部连合；花瓣蓝紫色或鲜绿色，着生于侧密腺上；子房无毛。

2. **龙木错高原芥**　新种　图 2：1—10

Christolea longmucoensis Y. H. Wu et Z. X. An, sp. nov.

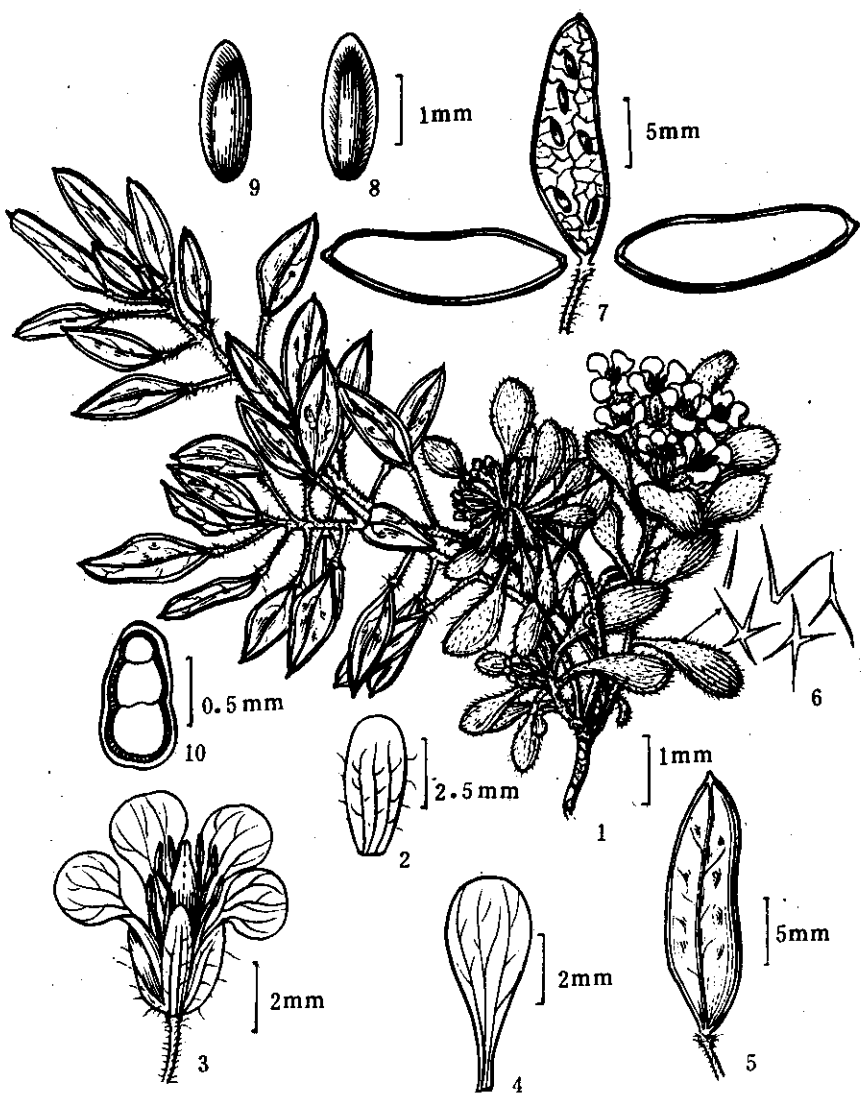

图 2　龙木错高原芥　1. 植株；2. 花萼；3. 花；4. 花瓣；5. 荚果；6. 毛放大；7. 荚果裂开，中间示隔膜和种子；8. 种子背面；9. 种子腹面；10. 水湿后的种子横切面。(阎翠兰绘)

Fig. 2　*Christolea longmucoensis* Y. H. Wu et Z. X. An: 1. plant; 2. calyx; 3. flower; 4. petal; 5. pod; 6. enlarged hair; 7. pod opened up, showing intermediate septum and seeds; 8. dorsal view of seed; 9. ventral view of seed; 10. the cross section of a watered seed

Species nova affinis *Ch. stewartii* (T. Anders.) Jafri, sed laminis foliorum integerrimis, siliquis longe ellipticis vel ovato-ellipticis, 8—20 mm longis, 3—7 mm latis, seminibus c. 2.2 mm longis differt.

Herba perennis, 4—8 cm alta, radice crassa descendenti, rhizomate ad basim ramoso, elongato tenuissimo, 1—2 mm crasso, ochroleuco. Folia basalia rosulata, carnosula, spathulata vel rhomboideo-spathulata vel anguste elliptica, 1—2.5 cm longa, 2—6 mm lata, integerrima, apice obtusa, basi in petiolum gradatim attenuata, utrinque pilis stellatis bifurcatis simplicibus sparsim obsita. Racemus terminalis, 6—22-florus; pedicelli c. 6 mm longi, villosi; sepala purpurea, anguste oblonga, villosa, apice obtusa, 5—6 mm longa, c. 2 mm lata, duo interiora leviter latiora; petala obovato-cuneiformia, purpurea, 6—8 mm longa, 2.5—3.5 mm lata, apice truncata, basi in unguem angustata; ovarium anguste ellipsoideum glabrum. Siliquae maturae longe ellipticae vel ovato-ellipticae, 8—20 mm longae, 3—7 mm latae, compressae, glabrae, purpureae vel flavo-virentes, costa expressa, septo membranaceo intacto; semina anguste ellipsoidea, spadicea c. 2.2 mm longa, cotyledonibus radiculae dorso accumbentibus.

Xizang (西藏): Rutog (日土), Longmu Co (龙木错), ad glaram alpinam, alt. 5380 m, 1987-09-02, Karakorum-Kunlun Exp. 1302 (Typus NWBI).

多年生草本，高4—8 cm。主根粗状下伸，根状茎细长，粗1—2 mm，黄白色，近基部分枝，基生叶丛莲座状，肉质，匙形或菱状匙形或狭椭圆形，连叶柄长1—2.5 cm，宽2—6 mm，全缘，顶端钝，基部渐狭成柄，两面疏被星状毛、2叉毛和单毛。总状花序顶生，6—22朵花；花梗长约6 mm，密被白色长柔毛；萼片紫色，窄长圆形，顶端圆钝，被长柔毛，长5—6 mm，宽约2 mm，内轮的两片稍宽；花瓣倒卵状楔形，紫红色，长6—8 mm，宽2.5—3.5 mm，顶端截形，基部渐狭成爪；子房狭椭圆形，无毛。角果长椭圆形或卵状椭圆形，长8—20 mm，宽3—7 mm，扁平，无毛，紫色或黄绿色，中脉明显，隔膜白色膜质，完整；种子长圆形，亮棕色，长约2.2 mm，子叶背倚胚根。花果期6—9月。

本种同少花高原芥 *Ch. stewartii* (T. Anders) Jafri 相似，但区别点在于：叶片全缘；角果长椭圆形或卵状椭圆形，长8—20 mm，宽3—7 mm，种子长约2.2 mm。